

Transcriptomic profiling of non-neoplastic ductal
salivary gland epithelial cell lines of patients with
primary Sjogren's syndrome

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Primary Sjogren's syndrome – Autoimmune epitheliitis

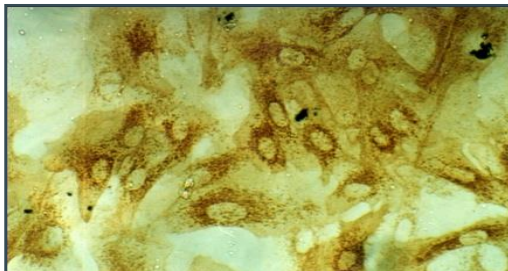
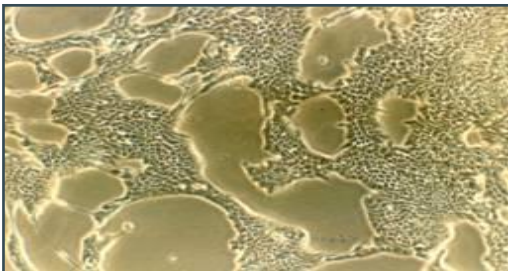
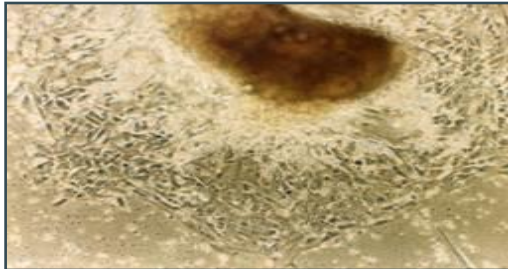
➤ Chronic exocrinopathy - systemic disease

- dysfunction - destruction of salivary and lachrymal glands
- chronic T & B lymphocyte infiltrations
- intense autoantibody responses
- Chronic immune activation: development of B-cell lymphoma
- **Major role of ductal salivary epithelia in pathogenesis**

Ex vivo study of epithelial cells

ESTABLISHMENT OF SALIVARY GLAND EPITHELIAL CELL CULTURES

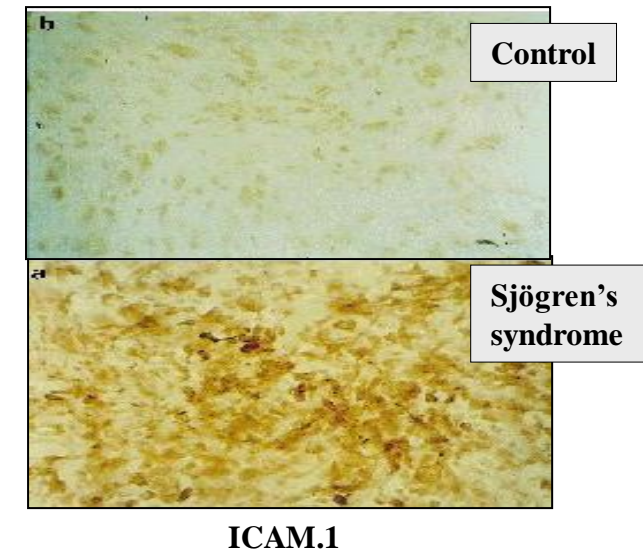
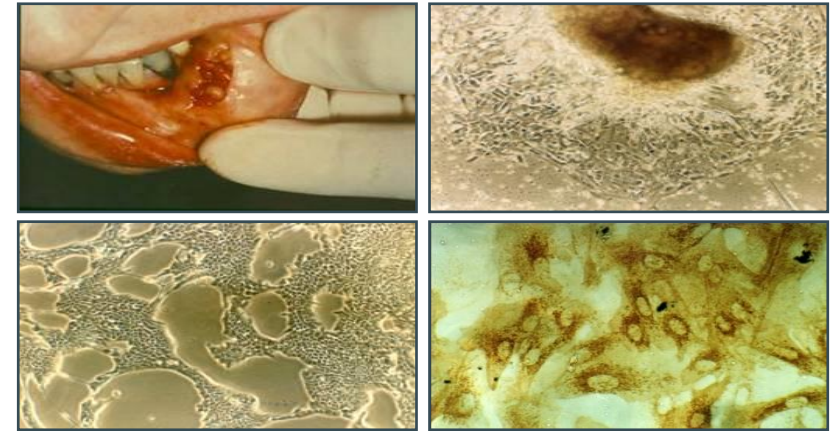
- long-term cultured cell lines
- non-neoplastic
- from one MSG lobule
- obtained during diagnostic biopsy (informed consent)



- Phenotypic characteristics (ductal type)
- Functional properties
 - immunologic function
 - interaction with immune cells
 - non-specific immunity
 - response to pro-apoptotic signals
 - response to hormones
 - cell type-specific functions
- Specific research
 - genetic make-up
 - epigenetic influences
 - infections
 - therapeutic interventions

Cultured SS-SGEC lines: INDICATE THE CELL-INTRINSIC ACTIVATION PHENOTYPE

- closely correlates with the histologic and systemic features of the disease
- increased constitutive expression of various molecules (vs controls)
 - analogous changes are also evidenced in-situ in the ductal epithelial tissues of SS patients
- various cell-autonomous functional aberrations
 - constitutive activation of NF- κ B signaling pathway
 - deficient response to estrogens
 - increased sensitivity to apoptosis



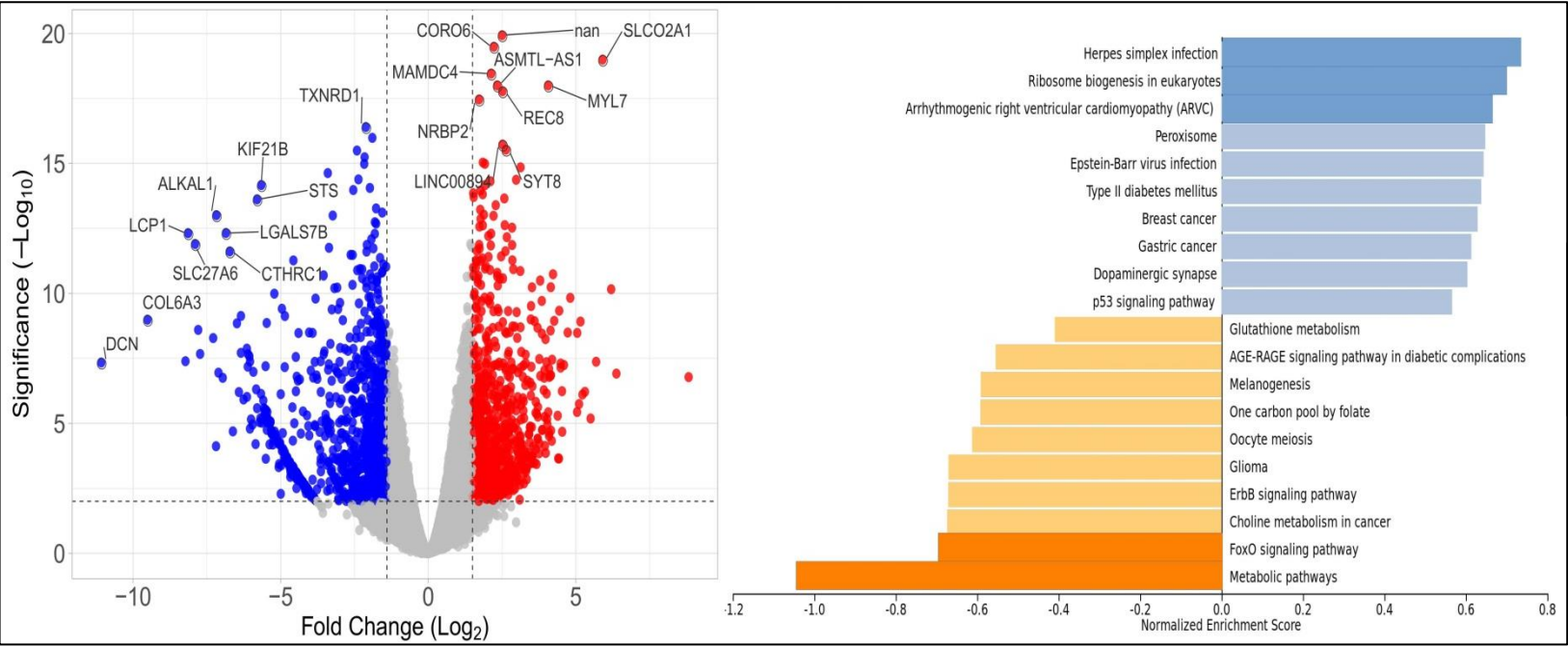
Transcriptomic profiling: SGEC groups studied

SGEC GROUPS	Number of SGEC lines studied	From patients who fulfilled SS Classification Criteria	From patients who presented features of severe SS *
CONTROLS	15	NO	NA
SS-INTERMEDIATE	8	YES	NO
SS-SEVERE	9	YES	YES

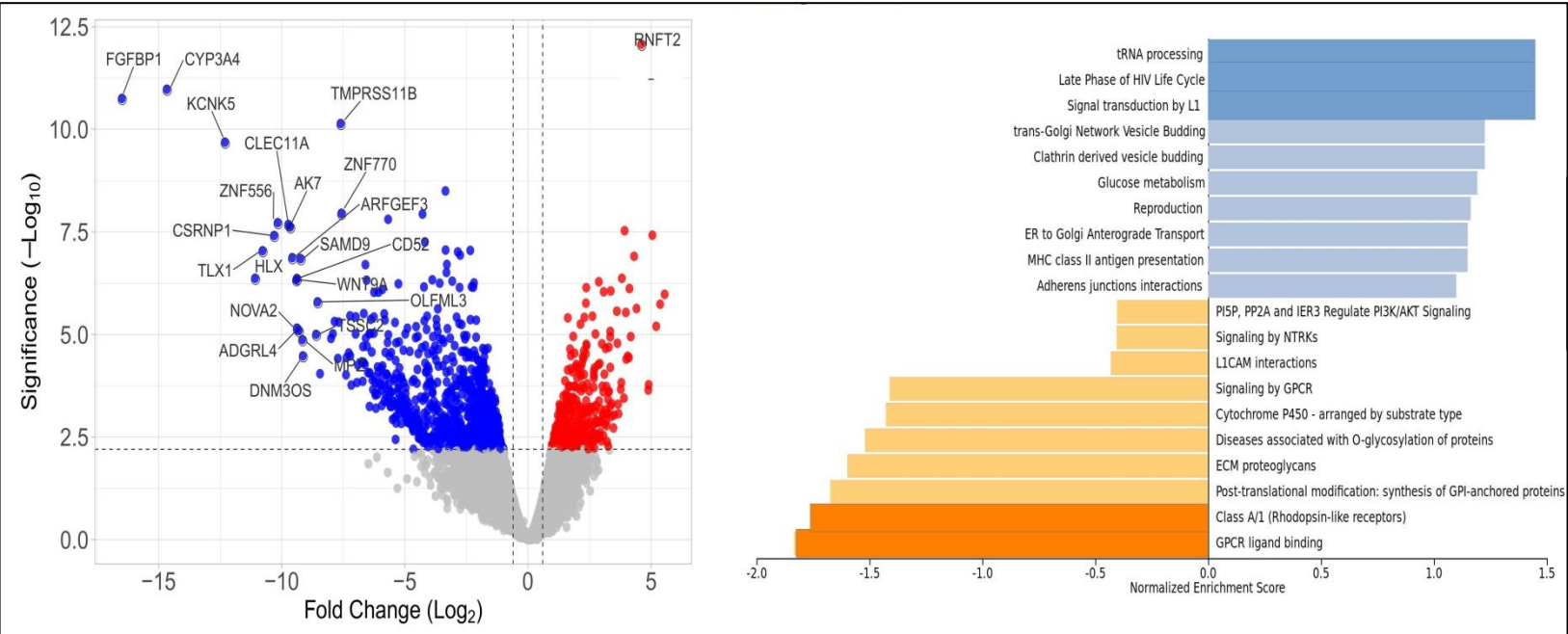
NA: not applicable.

*Features of severe disease: severe extra-glandular manifestations and display clinical or serological manifestations that constitute prognostic markers for the development of B-cell lymphoma in SS.

RESULTS-1

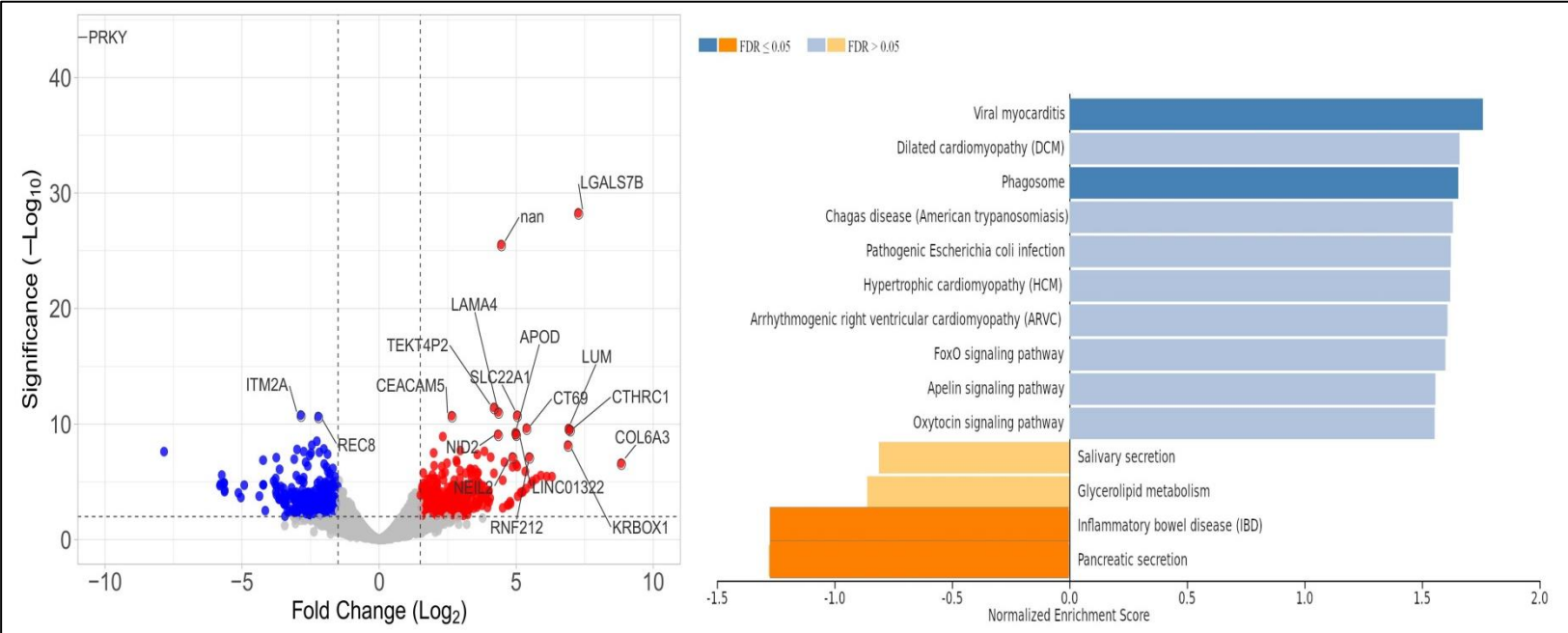


INTERMEDIATE
VS.
CONTROLS

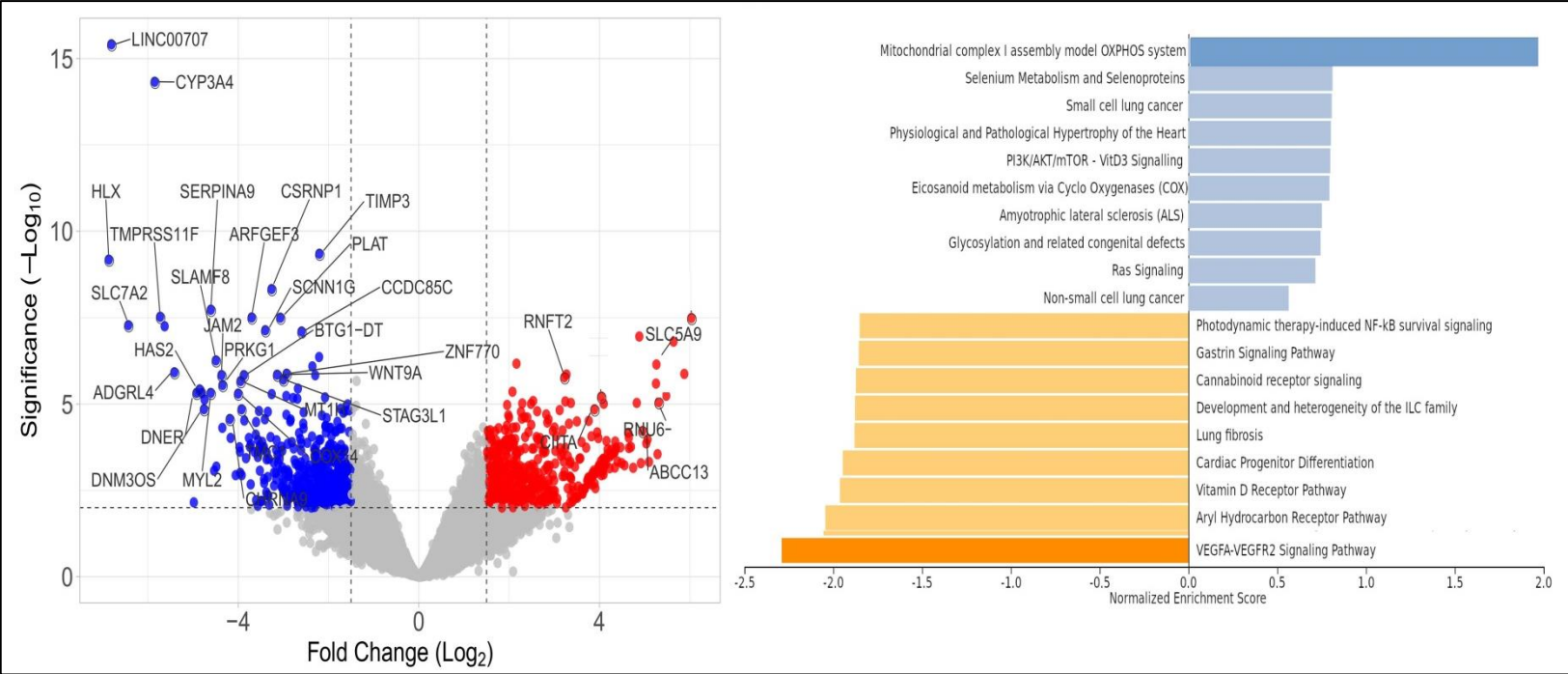


SEVERE
VS.
CONTROLS

RESULTS-2



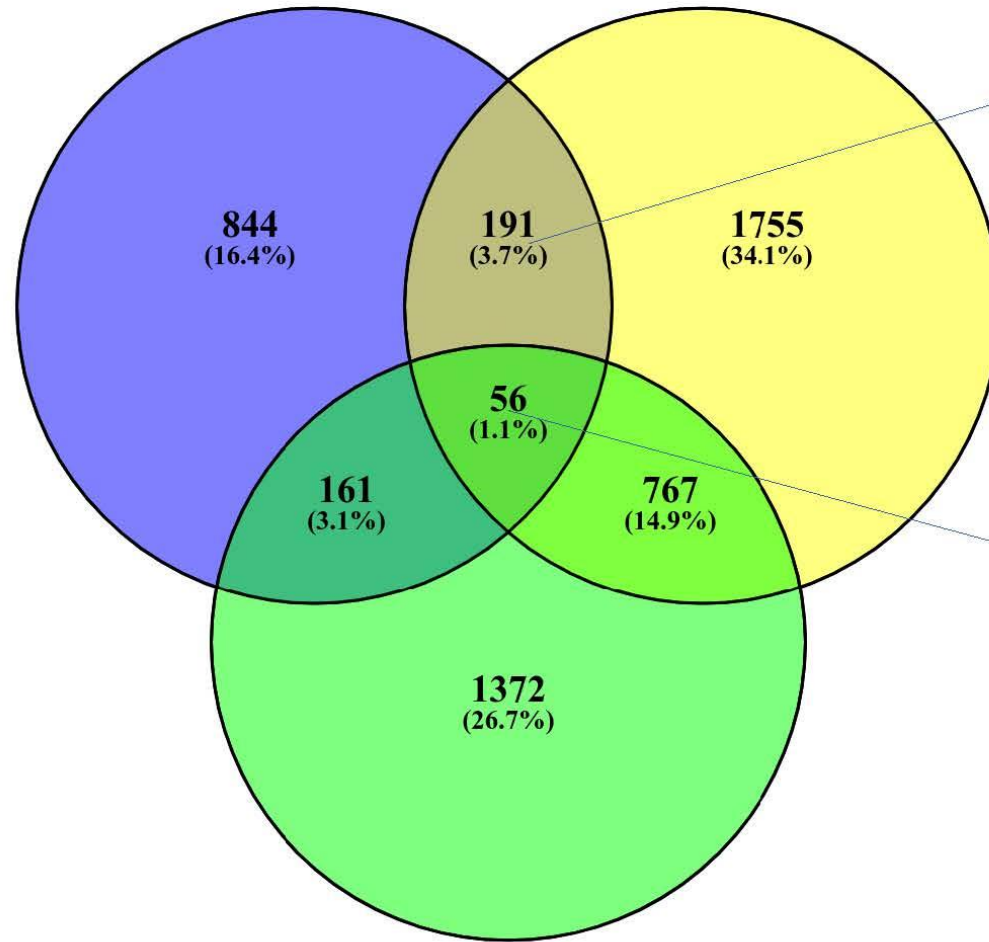
INTERMEDIATE
VS.
SEVERE



INTERM. + SEVERE
VS.
CONTROLS

intervscontrol

sevvvscontrol



intervssevere

